

miniCASTER®
Live Streaming as easy as a phone call

USER MANUAL



Table of Contents

1) Introduction	3
2) Connections.....	4/5
3) Production Scenarios	6
4) Technical Specifications	7/8
5) Encoding & Recording9
6) Remote Management	10
6.1) Manage Profile	11
6.1.1) LAN Profile	12
6.1.2) WiFi Profile	13
6.1.3) 2G/3G Profile	14
6.1.4) Input Profile	15
6.1.5) Encoding Profile	16
6.1.6) Output Profile	17
6.1.7) Delivery Profile	18
6.2) Manage Users	18
6.2.1) Create User	19
6.2.2) EditUserRights.....	19
7) Edit device	20
7.1) Web interface	21
7.1.1) miniCASTER® Status	21
7.1.2) Selected profiles	21
7.1.3) miniCASTER® to VLC	21
7.2) Device menu	22
8) Firmware update	23
9) Support	23
9.1) Documentation	23
9.2) Email support.....	23



miniCASTER®

1. Introduction

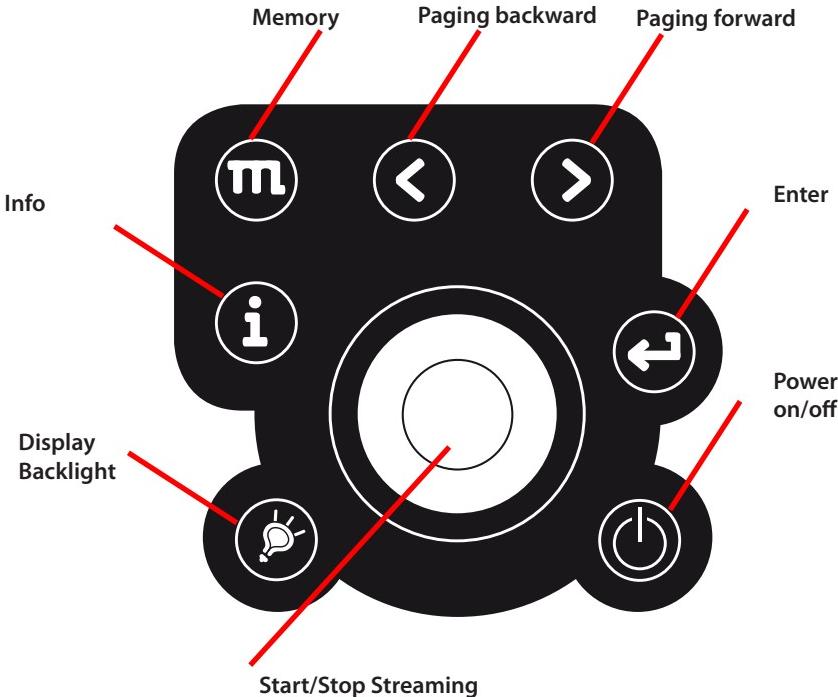
Thank you for purchasing the miniCASTER. This User Manual will show you how to handle the device.

What is miniCASTER®?

miniCASTER® is a truly mobile hardware based H.264 live encoder that converts any camera or video source signal into an IP based H.264/MPEG4 Live stream and delivers it via landline, WiFi, satellite or cellular networks to the leading Content Delivery Networks (CDNs) , Wowza and Adobe Media Servers and live video platforms like USTREAM.tv.

Through a built-in lithium-ion battery it is possible to work stand-alone. miniCASTER® generates one HD and one SD Stream in parallel and is able to record on SD-Card in the device itself at the same time. The mobile live encoder in pocket size comes in three different versions (SDI-in, HDMI-in, Composite-in) and can be operated in real-time via a web-based remote management portal and/or local interface. The HDMI and SDI version come with a DE-Interlacer on board. So your interlaced signals get a smooth look. Since miniCASTER® is passively cooled it can get quite warm. This is normal and should not bother you at all.

The On-Board menu



One-to-One Broadcasting

Why not start with a local LIVE stream straight to your PC/VLC Player?

Create profile

Name:

Delivery Mode: TS

Host*:

Stream 1
Port:

Stream 2
Port:

Stream 3
Port:

Make Available on all Devices

* required fields

save new

With miniCASTER® you can establish a quick and cheap One-to-One connection between your PC/Notebook and your miniCASTER®. Please make sure to use a port that is not used on the pc and not blocked by a firewall. Then choose TS as Delivery Mode Profile. This profile needs the Host address of the PC and up to three free ports.

After that you are able to decode the stream on your PC with the VLC player. Therefore please start the player, click on „open network stream“ and type in a URL like: `udp://@:<portnumber>*`.

Connections

2. Connections



Top side (All models)

1. LAN Connector
2. For future use
3. USB Slot (for WiFi, 2G/3G Stick or Memory Stick)
4. Reset button



Bottom side (Analog SD model)

1. S-Video Input
2. Tripod mount
3. Optional Analog Audio Input
4. Power Input (Micro USB)

Connections



Bottom side (HDMI® SD/HD model)

1. HDMI® Input
2. Optional Analog Audio Input
3. Power Input (Hi-Rose)



Bottom side (SDI SD/HD model)

1. SDI Input
2. Optional Analog Audio Input
3. Power Input (Hi-Rose)



Left side (All models)

1. SD Card slot for Recording



* via break-out cable

Production Scenarios

3. Production Scenarios

Thank you for purchasing the miniCASTER®. This User Manual will show you how to handle the device. miniCASTER® enables you to stream to a single destination or to many viewers and this is what your set-up should look like for these production scenarios:

For streaming to a single destination you need a decoder, where the miniCASTER® pushes the stream to. For streaming to many, you need a server like a Wowza Media Server or a Adobe Media Server in between. Companies like Akamai and Limelight offer a full streaming service.

Before you can start with any miniCASTER®, every device must be registered under my.minicaster.com first.

One-to-One



One-to-Many



You are only 6 steps away from going LIVE!

1. Connect your miniCASTER® to the power supply unit
2. Connect your miniCASTER® to your network via LAN cable (DHCP must be available)
3. Push the Power-Button and wait until the boot sequence has ended
4. Press the Info-Button , go to "Show network status" and press . Flip through the menu by pressing the buttons and double check your valid IP address
5. Press the Info-Button , go to "Show system info" and press . Flip through the menu by pressing the buttons and note the displayed and unique registration code
6. Go to <https://my.minicaster.com>. Create an account* and register your miniCASTER®. You are all set!

Technical Specifications

4. Technical Specifications

miniCASTER® is a MPEG-4 AVC H.264 SD/HD mobile encoder family – it comes in three different versions: miniCASTER® analog, miniCASTER® HDMI® and miniCASTER® SDI.

Supported Features

SD Resolutions (Analog, HDMI®, SDI models)
HD Resolutions (HDMI®, SDI models)
Composite Video Input/RCA connector* (Analog, HDMI®, SDI models)
S-Video Input / mini-DIN connector (Analog model)
HDMI® Input (HDMI® model)
SDI Video Input w/ embedded Audio / BNC connector (SDI model)
Stereo Analog Audio input / RCA connector* (Analog, HDMI®, SDI models)
Rechargeable Battery Li-Ion (Analog, HDMI®, SDI models)
Hardware De-Interlacer and Image Enhancer (HDMI®, SDI models)

Signal-Input Specifications:

SD/HD/3G-SDI: 0.8 VP-P, 75 Ohm (BNC, embedded audio support / SMPTE259M, SMPTE292M, SMP-TE424M)

HDMI: Type C, HDMI specification 1.1

Composite: 1 VP-P, 75 Ohm

S-Video: 1 VP-P (Y), 0.3 VP-P (C – Pal), 0.286 VP-P (C – NTSC), 75 Ohm

Video standards:

PAL, NTSC / Video resolutions:

1920x1080p 30/29.97/25Hz, 1920x1080i 60/59.94/50Hz, 1280x720p 60/59.94/50/30/29.97/25Hz, 720x576i 50, 720x480i 59.94

Audio Inputs:

Stereo: unbalanced, AC coupled,

Audio nominal level: -10 dBV (0,316Vrms),

Maximum level: 2 VP-P, Microphone nominal level: -60 dBV (1mVrms)

SDI embedded Audio 2CH: SMPTE 272M, SMPTE 299M

HDMI embedded Audio 2CH: HDMI 1.1. compatible audio interface

Encoding Specifications:

H.264 (MPEG-4 AVC Part 10; ISO/IEC 14496-10)

Supported profiles: Baseline, Main-, High-; supported levels: 1.- 4.1.

De-Interlacing:

HDMI-in + SDI-in models come with a intergrated De-Interlacer and image enhancer

Video Encoding Bitrates:

250Kb/s – 8 Mb/s, CBR, low latency enabled

Audio Encoding:

MPEG-4 AAC LC (ISO/IEC 14496-3)

Technical Specifications

4. Technical Specifications

Supported Sample Rates:

16/22.05/32/44/48 kHz (analog Audio) / 48kHz(SDI Audio, 16Bit Sample Rate, 16-128 kbit data rate

Stream Output:

MPEG2-Transportstream (ISO/IEC 13818-1) encapsulated in RTP (RFC 3550) including Audio (AAC) and video (H.264) or RTMP with limitations in bandwidth (appr. 2 Mbit/s)

I/O Specifications Network:

10/100TX Ethernet, RJ45, half/full duplex, auto-sensing

Streaming Traffic:

Unicast and Multicast traffic supported

USB:

1x USB 2.0 (on board Connector), High Speed, Type A socket

Management:

Full monitoring, Updates and maintenance over web based repository service
(<https://my.minicaster.com>)

Environmental Agency Approvals:

CE, FCC , RoHS

Humidity:

Up to 90%, non-condensing

Temperature:

0 to +35°C environment temperature, fanless

Weight:

260 grams (SD Analog), 360 grams (SD/HD SDI or HDMI)

Dimensions (H/W/D):

75mm x 125mm x 33mm

Power:

5V DC / 2.1 A (SD Analog – Micro USB), 8-24V DC / 2A (SD/HD SDI/HDMI – Molex locking connector)



Encoding & Recording

5. Maximum Encoding Values

Resolution	Bandwidth	Frames	Network	Delivery	Record	3 Streams parallel	2 Streams parallel	H.264 Level
1280x720	6 Mbit/s	25	WiFi	RTP/TS	NO	NO	NO	4.1 High
1280x720	4 Mbit/s	50	WiFi	RTP/TS	NO	NO	NO	4.1 High
1280x720	3.5 Mbit/s	25	WiFi	RTP/TS	YES	NO	NO	4.1 High
1920x1080	3 Mbit/s	24	WiFi	RTP/TS	NO	NO	NO	4.1 High
768x432	2.5 Mbit/s	25	WiFi	RTP/TS	NO	NO	NO	4.1 High
768x432	2 Mbit/s	25	WiFi	RTP/TS	YES	NO	YES	4.1 High
768x432	1 Mbit/s	25	WiFi	RTP/TS	YES	NO	NO	4.1 High
1920x1080	6 Mbit/s	25	LAN	RTP/TS	NO	NO	NO	4.1 High
1280x720	4 Mbit/s	25	LAN	RTP/TS	YES	NO	NO	4.1 High
768x432	3 Mbit/s	25	LAN	RTP/TS	YES	YES	YES	4.1 High
1280x720	2.5 Mbit/s	25	LAN	RTMP	NO	NO	NO	4.1 High
768x432	2 Mbit/s	25	LAN	RTMP	YES	NO	NO	4.1 High
768x432	1 Mbit/s	25	3G	RTMP	Valu	NO	NO	4.1 High

* Only one quality can be recorded at the same time!

* 3G: Depends on quality of your Provider-Network

Multi Stream Table I

Resolution	Bandwidth	Frames	H.264 Level	Recorded
768x432	3 Mbit/s	25	4.1 High or <	YES
640x360	1.5 Mbit/s	25	4.1 High or <	NO
512x288	750 Kbit/s	25	4.1 High or <	NO

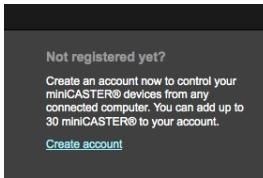
Multi Stream Table II

Resolution	Bandwidth	Frames	H.264 Level	Recorded
768x432	2 Mbit/s	25	4.1 High or <	YES
640x360	1 Mbit/s	25	4.1 High or <	NO

Remote Management

6. Remote Management

my.minicaster.com - Your web based real time operating platform.



The first thing to do, before you can start working with the Remote Management website is to create an account. After this is done, you can log in to my.minicaster.com and start registering your miniCASTER®. You can register more than one device with one account.

After logging in to my.minicaster.com, you will enter this page. Now you are able to manage profiles or users, browse and edit your devices and add a new miniCASTER to your Account. For editing your miniCASTER® please click „Edit device“ right under your device. You will find further informations on this in chapter 5.1. This page also shows you all your registered miniCASTER's and their actual connection status.

A screenshot of the my.minicaster.com device management interface. The top navigation bar includes links for Help, my.minicaster.com, and Logout, along with Manage Profiles and Manage Users buttons. The main content area displays five device cards: 1. KOBA 2012 (HDMI miniCASTER) - ON AIR, Serial: 411400047, Edit device. 2. Analog-UMTS (test) - NOT CONNECTED, Serial: 111250002, Edit device. 3. HDMI-Marketing (Test I - 28052012) - ON AIR, Serial: 412160006, Edit device. 4. KOBA 2012 (SDI miniCASTER®) - NOT CONNECTED, Serial: 311350001, Edit device. 5. Marketing-SDI (SDI SD/HD DEMO) - NOT CONNECTED, Serial: 311450056, Edit device. At the bottom, there is a navigation indicator showing "(1 - 5) of 11".



Remote Management / Profiles

miniCASTER® works with stored profiles. For each process of miniCASTER®'s tasks (Input, LAN, WLAN, 2G/3G, Output, Delivery) the device needs several specific information to do the job the way you want. Some information is too long and complicated to edit via the device. So, we created the remote management. A web based service which allows you to edit, save and upload settings under profiles on your device. Once they are stored, you can easily recall them by one click of a button.

6.1 Manage Profiles

At this point, you are able to manage profiles for all your miniCASTER's. You are also able to create new profiles by clicking [Create new profile](#), edit existing profiles or delete them.

There are two different types of profiles. Global profiles are default settings which are available to every user on my.minicaster.com. Custom profiles are customer specific profiles.

Every user of one customer can use the custom profiles and depending on his allowed privileges he is able to modify them. With the "view device list" button users are able to publish the profiles to different devices.

Name	DHCP	IP Address	Actions
DHCP	yes		Edit

Name	DHCP	IP Address	Actions
test-local	no	192.168.1.78	Edit
Akademie free	no	192.168.1.133	Edit
Andreas Ethernet	no	10.10.40.222	Edit

When creating or editing a profile you always have the first field that specifies the name of it. With the checkbox at the bottom of creating a new profile you have the option to make the profile available to all your devices.

Remote Management / LAN

6.1.1 LAN Profiles



The most reliable way to go LIVE is to use the LAN connection. You can use a DHCP connection, or type in your specific IP Address. Make sure, that your Firewall and port restrictions are turned off. Otherwise you could face trouble when trying to operate miniCASTER® remotely.

The screenshot shows the miniCASTER LAN Profiles interface. At the top, there's a navigation bar with 'Home', 'Edit device', 'Device-Profiles', 'Help', 'minicaster.com', and 'Logout'. Below that, it says 'KOBIA 2012' and 'HDMI miniCASTER'. On the left, there's a sidebar with a 'LAN Profiles' icon. The main area has two sections: 'Profiles available on Device' with a 'Create new profile' link, and 'Profiles to set available'. Both sections have search bars and tables with columns for Name, DHCP, IP Address, and Actions. The 'Profiles available on Device' table shows one entry: 'DHCP' with 'yes' under DHCP. The 'Profiles to set available' table shows three entries: 'test-local' (DHCP: no, IP: 192.168.178.63), 'Akademie free' (DHCP: no, IP: 192.168.1.133), and 'Andreas Ethemet' (DHCP: no, IP: 10.10.40.222).

The screenshot shows a 'Create profile' dialog box for 'Andreas Ethernet'. It has tabs for 'Basic Settings' (selected) and 'Proxy Settings'. The 'Basic Settings' tab contains fields for 'Name *:' (empty), 'DHCP *:' (set to 'yes'), 'IP Address *:', 'Subnetmask *:', 'Gateway *:', and 'DNS Server *:'. Below these fields are checkboxes for 'Make Available on all Devices' (unchecked) and 'required fields' (highlighted in red). At the bottom are 'cancel' and 'save new' buttons.

When creating a new LAN profile, you can specify the IP Address, Subnetmask, Gateway and DNS Server. If you aren't selecting DHCP, you have to type in Name, IP address and Subnetmask, Gateway and DNS Sever credentials.

After typing in all required informations please click the "save new" button to make your new profile available.

For assigning a DHCP address you are able to get the MAC-Address of your device on the miniCASTER® Webinterface or on the Information menu on your miniCASTER®. These steps are explained on chapter 5.

Remote Management / WiFi

6.1.2 WLAN Profiles



Wireless streaming is easy and set up in a few seconds. Please do only use the certified CISCO WiFi stick, that comes with your miniCASTER® since it is certified by us and connects quickly with your new device. After setting up your system incl. your local WiFi/Access point credentials, miniCASTER® will always try to connect to one of the known WiFi Network.

Profiles available on Device Create new profile					Profiles to set available				
Name	DHCP	IP Address	ESS-ID	Actions	Name	DHCP	IP Address	ESS-ID	Actions
Michaels-iPhone-4S	yes	iPhone 4S Michael Westphal	●	trash	sgs22	yes	sgs2	●	trash
Michael dahlein	yes	MiniMouton	●	trash	FRITZ!Box WLAN 3270 open	yes	FRITZ!Box WLAN 3270	●	trash
TV1-WLAN	yes	TV1-WLAN	●	trash	TESTOPEN	yes	TESTOPEN	●	trash
TV1-Messe	yes	TV1-Messe	●	trash	Cottage	yes	Leander12008	●	trash

Create profile [cancel](#)

Name *:

LAN options

[Basic Settings](#) [Proxy Settings](#)

DHCP *: yes

IP Address *:

Subnetmask *:

Gateway *:

DNS Server *:

WLAN options

ESS-ID *:

Wireless Mode *: Managed

Security Mode *: None

Encryption Method *: Auto

WLAN Key: [→](#)

Make Available on all Devices

* required fields

[save new](#)

When creating a new WiFi Profile, you can specify the IP Address, Subnetmask, Gateway and DNS Server. If you aren't selecting DHCP, you have to type in a Name, IP address and Subnetmask.

Gateway and DNS are optional. With the checkbox at the bottom you have the option to make the new profile available to all your devices.

Your Access Point parameters have to be typed in the field „WLAN options“. Please look these up in your official Access Point papers and double check before clicking the „save new“ button.

Maximum recommended Bandwidth when using WiFi is 3.5 Mbit/s. Line of sight between your miniCASTER® and your Access point is a must!

Remote Management / 3G/4G

6.1.3 2G/3G/4G Profiles



Wireless connections, especially 3G/4G, are not very reliable. More and more people are online with their Tablets and Smart phones, therefore upload capacity is limited at crowded places. If you are planning to go LIVE via 3G/4G, please keep in mind, that miniCASTER® can only accept one Surfstick on its USB port. Depending on coverage and quality of your Telecommunication provider results can vary. We have seen upload speed from 256 kb to 5 Mbit in different countries and situations. If you seriously have to rely on 3G/4G LIVE streaming you should invest in an external channel bonding device which is available in our shop: <http://shop.minicaster.com>.

The screenshot shows the '2G / 3G Profiles' section of the software. On the left, under 'Profiles available on Device', there is a search bar and a placeholder 'Drag and Drop Profiles here'. On the right, under 'Profiles to set available', there is another search bar and a table listing profiles:

Name	APN	PIN
O2	Internet	7422
T-Mobile	Internet.t-mobile.de	5163
Vodafone	web.vodafone.de	0554
test	test	

The screenshot shows a 'Create profile' dialog box. It has fields for Name*, APN*, User*, Password*, PIN*, and PUK*. Below these fields are checkboxes for 'Make Available on all Devices' and 'required fields'. At the bottom are 'cancel' and 'save new' buttons.

After clicking „Create new profile“ a pop-up window will appear. In this area you can type in your personal credentials which should be shown in your contract details coming from your Telco company. Please keep in mind, that it is your own contract and your own data card / data plan.

Therefore you are the only person having access to these informations. Our technical support can not help you in this case ;).

Make sure to click „save new“ to apply your new profile to your miniCASTER®

Surfsticks / Mobile Hotspots

You should work with one of our recommended Sticks or Hotspots. We provide an actual overview on our website: <http://www.minicaster.com/3g4g-supported-device/>

Remote Management / Input

6.1.4 Input Profiles



When clicking on edit input profiles, you will be able to create new input profiles. You can decide whether the Audio signal should be ingested embedded in the SDI or HDMI® signal or whether it should be ingested coming from an external source. In this case the Audio signal should be ingested via the minijack port on the bottom side of your miniCASTER®.

Click on cropping to set exact cropping pixel parameters regarding on the signal you are ingesting, in order to adjust your encoding profile.

The screenshot shows a list of input profiles. On the left, under 'Profiles available on Device', there are profiles for SDI-IN, HDMI-IN, and 1080/59.94. On the right, under 'Profiles to set available', there are profiles for COMPOSITE-IN, SDI-ext-audio, and Infotainweb-Event. Each profile entry includes fields for Name, Video In, Audio In, and Audio channel, along with edit and delete icons.

The 'Create profile' dialog box contains the following fields:

- Name:
- Input options:
 - Video in: COMPOSITE (selected)
 - Audio in: SDI, HDMI, SVIDEO (disabled)
 - Audio channel: STEREO (disabled)
 - Audio rate: COMPOSITE (selected)
- Cropping:
 - top: 0
 - left: 0
 - right: 0
 - bottom: 0
- Checkboxes:
 - Make Available on all Devices
 - * required fields
- Buttons: save new

When creating a new Input Profile you have to give that profile a name.

After that please choose the kind of signal you want to ingest, by clicking „SDI“, „HDMI“„, „SVIDEO“ or „COMPOSITE“ within the drop down menu as shown on the left.

Available options are:

Video in:

- HDMI/SDI (with embedded or analog audio source)
- SVIDEO
- COMPOSITE

Audio in:

Stereo, Left or Right

Audio rate:

16 – 48 KHZ

Please make sure to click the „save new“ button to apply your new profile to your miniCASTER®.

Remote Management / Encoding

6.1.5 Encoding Profiles

Encoding Profiles

Profiles available on Device				Profiles to set available			
Name	Size	Video Bandwidth	Actions	Name	Size	Video Bandwidth	Actions
720p 3Mbit	1280 x 720	3000		720p 3.5Mbit	1280 x 720	3500	
720p 1Mbit	1280 x 720	1000		512x288 500k	512 x 288	500	
576p 16:9 1,5MBit	1024 x 576	1400		512x288 16:9 300k	512 x 288	260	
576p 16:9 1Mbit	1024 x 576	1024					
576p 4:3 1,5Mbit	768 x 576	1400					
288p 16:9 750k	512 x 288	680					
288p 4:3 750k	384 x 288	640					

Create profile [cancel](#)

Name *:

Video

Width *:

Height *:

Video Bandwidth *:

Framerate *:

Keyframeinterval *:

h.264

h.264 Profile *:

h.264 Level *:

Audio

Bandwidth *:

Audio mode *:

Compatibility

iPod:

iPhone:

iPad:

Common Mobile Devices:

Make Available on all Devices

* required fields

save new

When unboxing the device and bringing it online for the first time, you will find some common 4:3 and 16:9 Encoding profiles on your miniCASTER®.

Of course you can delete these and/or create multiple profiles meeting your specific needs. In the Video area you can type in your individual Size, Bandwidth, Framerate and Keyframe interval. Within the H.264 settings you can choose between different available Levels. Bandwidth and Audio mode can also be set individually.

In the Compatibility area you can see if your profile setting can be displayed on iPod, iPhone and iPad. The chart below shows the required settings for these devices.

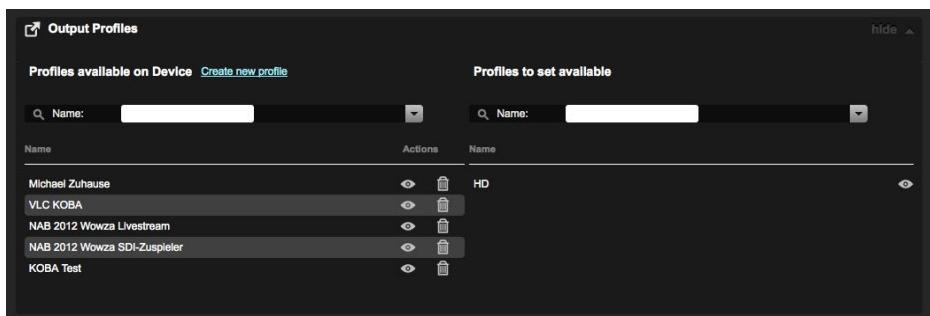
	IPod	IPhone	IPad	Common
Width	320	640	1280	-
Height	240	480	720	-
Profile	Baseline	Baseline	Main, Baseline	
Base-line				
h.264 Level	1.3	3.0	3.1	1.2
Video BW	768	900	2500	386
Audio BW	128	160	160	-

Remote Management / Output

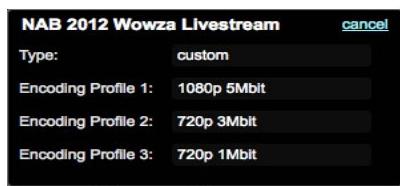
6.1.6 Output Profiles

Output Profiles

One of the most important areas is the Output Profile setting area. You can basically create any kind of Resolution and/or Bandwidth. The greatest advantage is that you can set up to three different stream qualities and then decide on the fly, which one/two streams should be streamed simultaneously. You can also stream and record at the same time. If your Upload Bandwidth is poor, simply stream the low quality LIVE and record the high quality for on demand playout or as a back-up file.



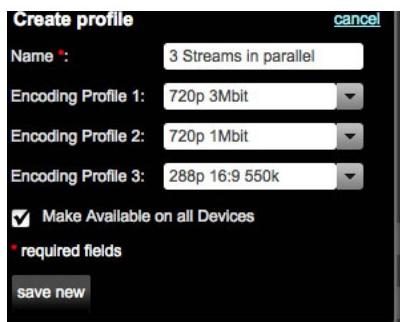
The screenshot shows the 'Output Profiles' management interface. It has two main sections: 'Profiles available on Device' and 'Profiles to set available'. In the 'Profiles available on Device' section, there is a search bar for 'Name' and a list of profiles: Michael Zuhause, VLC KOBAs, NAB 2012 Wowza Livestream, NAB 2012 Wowza SDI-Zuspieler, and KOBA Test. Each profile has an 'eye' icon and a trash bin icon next to it. The 'NAB 2012 Wowza Livestream' profile is currently selected. In the 'Profiles to set available' section, there is also a search bar for 'Name' and a list of profiles: HD, NAB 2012 Wowza Livestream, NAB 2012 Wowza SDI-Zuspieler, and KOBA Test. The 'HD' profile is highlighted.



The screenshot shows the detailed view of the 'NAB 2012 Wowza Livestream' output profile. It includes fields for 'Type' (set to 'custom'), and three 'Encoding Profile' dropdown menus containing '1080p 5Mbit', '720p 3Mbit', and '720p 1Mbit' respectively. There is also a 'cancel' button at the top right.

The left screenshot shows you the detailed view of an existing and already created Output Profile.

In this case we chose three different qualities while attending NABShow 2012. You will receive this detailed information after clicking on the „“ symbol.



The screenshot shows the 'Create profile' dialog box. It has fields for 'Name' (set to '3 Streams in parallel'), three 'Encoding Profile' dropdown menus (set to '720p 3Mbit', '720p 1Mbit', and '288p 16:9 550k' respectively), a checked checkbox for 'Make Available on all Devices', a note 'required fields' with a red asterisk, and a 'save new' button at the bottom.

When creating a new Output profile you should give this profile a specific name. miniCASTER® is able to generate three streams at the same time, therefore it makes sense to choose different resolutions/qualities. If your playout should be able to detect the users bandwidth quality....the most suitable stream will be played out and displayed.

Again it is possible to apply this profile to one or all of your miniCASTER® devices by clicking the „save new“ button.

* TS is only available from Firmware 1.3.1 or higher. Direct streaming to a VLC Player/local host is also explained at point 5.1.3 in this manual.

Remote Management / Delivery

6.1.7 Delivery Profiles



When it comes to Delivery, miniCASTER® is pretty much open. Since you can choose between the RTP and RTMP protocols, it is quite easy to address common CDNs or LIVE platforms. RTP should be ingested to a Wowza Media Server, RTMP should be ingested to a Adobe Flash Media Server or also a Wowza Media Server.

The screenshot shows the 'Delivery Profiles' section of the miniCASTER interface. It consists of two main tables:

- Profiles available on Device:** This table lists existing delivery profiles. The columns are Name, Delivery Mode, Host, and Actions (edit and delete). Examples include "NAB 2012 Wowza Livestream" (RTP, 10.11.88.88), "livestream.com - minicaster" (RTMP), "stream 2 pc" (RTP, 192.168.1.148), "VLC Test" (TS, 10.4.174.150), "USTREAM TV" (RTMP, 1.11122696.fme.ustream.tv), and "KOBA again" (TS, 192.168.0.25).
- Profiles to set available:** This table lists profiles ready to be applied. The columns are Name, Delivery Mode, Host, and Actions. Examples include "PC Chris" (RTP, 10.10.99.134), "TV1 Test" (RTMP, 46.18.243.10), "sync-Test devwowza" (RTP, 10.10.40.50), "test" (RTMP, 10.10.40.50), "testandreas" (TS, 10.10.99.222), and "test_japan" (RTMP, nipoca37.live.nicovideo.jp).

Choose between RTP, RTMP or TS* as Delivery mode. For RTP please type in a specific Name, a valid Host and the correct Port numbers for all three Stream qualities you want to deliver. For RTMP you should type in a specific name and choose a Provider (for example „Generic“) within the drop down menu. Please do also enter the correct FMS URL and Stream details which should be provided by your CDN or LIVE platform.

Please note : If you should decide to ingest to a WowzaMedia Server Infrastructure, you can also find a very helpful tutorial by Wowza here:

<http://www.wowza.com/forums/content.php?374-How-to-use-Minicaster-live-stream-encoder-with-Wowza-Media-Server>

This dialog box is used to create a new delivery profile. It includes fields for Name, Delivery Mode (set to RTP), Host, Port, Stream 1, Stream 2, and Stream 3. At the bottom, there are checkboxes for "Make Available on all Devices" and "required fields", and a "save new" button.

This dialog box is used to create a new delivery profile. It includes fields for Name (set to "3 Streams in parallel"), Encoding Profile 1 (720p 3Mbit), Encoding Profile 2 (720p 1Mbit), Encoding Profile 3 (288p 16:9 550k), and checkboxes for "Make Available on all Devices" and "required fields". A "save new" button is at the bottom.

This dialog box is used to create a new delivery profile. It includes fields for Name, Delivery Mode (set to TS), Host, Port, Stream 1, Stream 2, and Stream 3. At the bottom, there are checkboxes for "Make Available on all Devices" and "required fields", and a "save new" button.

Remote Management / User Management

6.2 Manage Users



Within my.minicaster.com you can create and edit users at any time. You can also set and exchange specific rights, or delete single users whenever you want it.

First Name	Last Name	Action
nobbi	Wetphal	<input checked="" type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
mischl	schmid	<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
andreas		<input type="checkbox"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>

6.2.1 Create User

Every user can receive individual rights through clicking on the „Key“ button after being created. Mandatory fields are marked with a star „*“.

Create user [cancel](#)

First name

Surname

Username *

Password *

Retype password *

Email *

[Save](#)

Edit Userrights for testuser [cancel](#)

Administrator Right

Is Admin

Profile Rights

Create Profiles

Edit Profiles

Delete Profiles

global miniCASTER Rights

Register Devices

Access to all Devices

miniCASTER Access Rights

Chris RC (311280004)

Demo analog (311320001)

Analog>Show-1 (311320008)

SDI>Show-3 (311350004)

SDI>Show-1 (311350013)

SDI>Show-4 (311350017)

Demo-HB (311350019)

SDI>Show-5 (311350030)

SDI-Demo-1 - RTMP-Test (311350031)

[Save](#)

6.2.2 Edit user rights

Admin rights: Root rights within the customer area

Profile rights: Profile specific rights to create, edit or delete

Global miniCASTER® Rights: Global rights to add devices or to control them

miniCASTER® Access Rights: Rights to control different miniCASTER® devices

Remote Management / Device Editing

7.1 Web interface

my.minicaster.com is structured in two main areas. On the left side you will find general informations like name, actual status, input signal etc.. On the very low left side you will see the Serial, MAC adress and also Firmware version. The right side is your dashboard and offers all important profile settings as described on the first pages of this manual.

The screenshot shows the miniCASTER® web interface. On the left, there's a summary of device status with icons for power, battery, and various network and signal connections. It also shows streaming controls (Stream On/Off, Preview) and recording controls (Record On/Off). Below this, it displays the serial number, MAC address, and last seen information. The right side is a dashboard for managing profiles:

- LAN Profile:** DHCP (dropdown menu with "show" option)
- WLAN Profile:** TV1-WLAN (dropdown menu with "show" option)
- 2G / 3G Profile:** No Active Profile (dropdown menu with "show" option)
- Input Profile:** SDI-IN (dropdown menu with "show" option)
- Recording Profile:** USB (dropdown menu with "show" option)
- Output Profile:** HD-OUT (dropdown menu with "hide" option)
 - Encoding Profile 1:** Name: 1000p 5Mbit (checkboxes for stream and record)
 - Encoding Profile 2:** Name: 720p 3Mbit (checkboxes for stream and record)
 - Encoding Profile 3:** Name: 720p 1Mbit (checkboxes for stream and record)
- Delivery Profile:** 311360019 Default Delivery Profile (dropdown menu with "show" option)

At the bottom, there's a note about the trademark and a copyright notice.

You will get realtime feedback from miniCASTER®. You can edit every setting on the fly and start/stop your miniCASTER® with a single click. Once your miniCASTER® is online and has received a valid IP adress and Input signal, please start the stream as shown above. When choosing the Default Delivery Profile, you will see a Hyperlink next to the „STREAM ON“ button called „PREVIEW“. By clicking on this „PREVIEW“ button the TV1.EU preview player will start in a pop-up frame. This enables you to check the LIVE stream that is generated by your miniCASTER® and delivered by the TV1.EU CDN.

Please note: Before this works, you have to choose a LAN profile (should be DHCP) and Input profile. Make sure that you have set the „STREAM“ button to „ON“. Input signal detection can only be started after pushing the „ON“ button due to miniCASTER® architecture.

Remote Management / Device status

7.1.1 Device status

The left area of my.minicaster.com shows your miniCASTER® and right next to it you will see all relevant connections incl. the actual status of every connection. These connections are: USB Port, SD-Card Slot, LAN, WiFi and Input Signal.

You will receive the following feedback:

USB-Port:	Connected Device (WiFi Dongle, 2G/3G/4G Dongle or USB storage) / Not attached
SD:	Mounted SD Card / Not attached
LAN:	LAN-connection und valid/actual IP address / Not attached
WLAN:	WiFi-connection und valid/actual IP address / Not attached
Input Signal:	Signal type, resolution and frame rate / No Input Signal detected

You can separately start/stop the Streaming and Recording function. That means you can stream LIVE and/or record at the same time. **Very important: You can also record only!**

7.1.2 Select profiles

In this area (Output profiles) all applied profiles are displayed. By ticking one of the offered fields you can tell your miniCASTER® which Stream should be streamed LIVE and/or recorded. You can stream two Streams in parallel while recording one Stream at the same time.

Please note: Due to the architecture of miniCASTER® it is not possible to stream 2 HD Streams while recording one HD stream at the same time.

You can also edit temporary default profiles at any time.

7.1.3 Streaming directly to a VLC player

You also have the option to stream directly to a nearby PC. Therefore you can select the Temporary Delivery Profile and enter the host-address and up to three free ports of the PC you want to use. After that you are able to decode the stream on your PC with VLC, click on „open network stream“ and type in a URL like: `udp://@:<portnumber>*`. In case you want to stream via RTP protocol, the correct URL is: `rtp://@:<portnumber>*`.

Please make sure to use a port that is not used on the pc and not blocked by a firewall. This profile needs the Host address of the PC and up to three free ports. The Delivery Mode for streaming to VLC should be TS*.

*Please note that Delivery mode TS is only available from Firmware 1.3.1 or higher. (The port number could be 7000 or 10000)

miniCASTER® menu

7.2 Device menu

The Menue button will lead you to the follwing profile menus:

- Select output profile
- Select input profile
- Select LAN profile
- Select WLAN profile
- Select 2G/3G profile
- Unmount device (USB or SD-Card)

The Info button will lead you to the Network and System infos. The following system-information are available:

- MAC-Address
- PIC-Version
- Register Code (For registration on my.minicaster.com)
- Serial Number (Important for technical requests)

The red central button starts/stops all selected encoding profiles. By pushing the „light bulb“ button you can adjust the Backlight of your Display in three steps from 50% to 100%.



Firmware / Support

8. Firmware update

We will inform you via Newsletter and on Facebook as soon as a new Firmware Image is available. If you have registered your miniCASTER® to my.minicaster.com, it will check for upgrades automatically every time it is online. To update your Firmware you need an Imagefile which is named: miniCaster-Images. In order to execute this Image it has to be saved to the root file of a USB stick. Once this is done..please follow these easy steps:

1. miniCASTER® has to be shut down / turned off
2. Plug the USB stick
3. Push the Power button
4. After miniCASTER® has recognized the file on the USB stick, please push the central, red button. The update will take approx. 10 minutes.
5. After the latest miniCASTER® Firmware has been installed successfully your device will reboot and hold for a short time on booting stage 4 if your USB stick still be plugged
6. After Re-booting the update was successfully and you can start working with your updated miniCASTER®

9. Support

9.1 Documentation

In addition to this Manual you will find Video tutorials on my.minicaster.com when clicking the „Help“ menu button on the very upper right side. You will find several „How-to“ PDFs on <http://www.minicaster.com/how-to%C2%B4s-support/>

9.2 Email support

You can easily send us your questions with our contact form on <http://www.minicaster.com/support-form/>



miniCASTER®

Live Streaming as easy as a phone call.

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